Department of Pesticide Regulation

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STATUS REPORT FOR FUMIGANT PESTICIDES

June, 2002

I. SCHEDULED AIR MONITORING

The Air Resources Board (ARB) conducted ambient air monitoring for methyl bromide, 1,3-dichloropropene, methyl isothiocyanate, MITC (generated from metam sodium), and chloropicrin during the 2001 pesticide use season. The air monitoring was completed during July and August 2001 in Kern County, and September through early November 2001 for Monterey and Santa Cruz counties. Air concentrations of methyl bromide detected in Monterey and Santa Cruz counties for 2001 were lower than those detected in 2000. As in 2000, none of the detected concentrations exceeded the acute reference concentration. *(Department of Pesticide Regulation [DPR] scientists refer to reference concentrations identified in risk assessments. Reference concentrations indicate when further investigation of monitoring data is warranted; the values do not necessarily dictate regulatory action.)*

DPR's reference concentration for subchronic exposure (one part per billion [ppb] average concentrations over the eight-week monitoring period) was exceeded at five of the six monitoring sites in Santa Cruz and Monterey counties. The highest average methyl bromide concentration detected was 5.5 ppb. DPR is awaiting the final ARB report for the Kern County monitoring. Air concentrations of 1,3-dichloropropene detected in 2001 were higher than those detected in 2000, but still less than both the acute and subchronic reference concentrations. Cancer risk will be estimated from this data and compared to modeling. The higher 1,3-dichloropropene air concentrations are likely due to increased use of this fumigant in place of methyl bromide. Detailed reports of the monitoring can be found on DPR's Web page at:

http://www.cdpr.ca.gov/docs/empm/pubs/tac/methylbr.htm.

Monitoring reports for the other chemicals will be completed later in 2002.

ARB also conducted air monitoring at an application site for chloropicrin in Monterey County to document short-term exposure levels. DPR collected side-by-side samples of methyl bromide for comparison. These reports are in preparation.

On April 5, 2002, methyl bromide registrants submitted to DPR a revised report describing air monitoring in high use areas of Ventura and Santa Barbara counties in 2001. The air monitoring was conducted under the protocol and requirements agreed to under the June 26, 2001 reevaluation. Methyl bromide air concentrations at one of the four monitoring sites in Santa

Barbara County exceeded the subchronic reference concentration; highest concentration detected was 1.3 ppb. None of the methyl bromide air concentrations detected in Ventura County exceeded the reference concentrations. However, monitoring in Ventura County did not occur during the peak use season. Moreover, numerous samples were invalid or excluded. A detailed report of the registrant monitoring is available on DPR's Web page at:

http://www.cdpr.ca.gov/docs/empm/pubs/tacpdfs/rept_0402.pdf

The methyl bromide air monitoring by the State and by the registrants, and DPR's evaluation of the data will be the subject of a workshop on June 28, 2002, from 9:00 a.m. to 2:00 p.m. at the Cal/EPA Coastal Hearing Room, 1001 I Street, Sacramento.

At DPR's request, ARB monitored a metam sodium fumigation applied through a drip irrigation system in May 2002. Also, at DPR's request, ARB plans to monitor a structural fumigation of sulfuryl fluoride in 2002.

ARB has a network of stations that routinely monitor California's air for a variety of pollutants such as ozone, particulate matter, metals, and other toxic air contaminants. In late 2001, ARB added methyl bromide and 1,3-dichloropropene to its routine monitoring network. ARB currently monitors for methyl bromide and 1,3-dichloropropene every 12 days at approximately 20 stations in primarily urban areas throughout the State.

II. ACUTE BUFFER ZONE MODELING

DPR utilizes a standard methodology to calculate buffer zones for acute exposures. Fumigant pesticide registrants and some grower groups have suggested some specific refinements to the current modeling methodology that they believe will improve the procedure and incorporate local information and more representative meteorological conditions. Industry has proposed changes to DPR's modeling procedures, including using historical weather data, revising the method to estimate flux and the method to determine the size of buffer zones. DPR is reviewing the industry proposal.

III. METHYL BROMIDE

1. Risk Assessment/Data Evaluation

   - DPR scientists are making final changes to the methyl bromide risk characterization document to incorporate the National Academy of Science peer review comments. The risk characterization document for methyl bromide will be ready for distribution by July 2002.

2. Risk Management Status

- DPR will issue a risk management directive based on the results of 2001 air monitoring studies. ARB and the methyl bromide registrants submitted reports to DPR describing air monitoring in high use areas of Kern, Monterey, Santa Cruz,Ventura, and Santa Barbara counties in 2001. DPR will prepare an analysis of these data by June 2002. A risk management directive will be prepared later in 2002.

- The California Rural Legal Assistance Foundation requested, and the Superior Court of California, Monterey County granted, a temporary restraining order for methyl bromide soil fumigation applications that impact the La Joya Elementary School and the Pajaro Middle School in Monterey County. DPR and the Monterey County Agricultural Commissioner appealed the Monterey County Superior Court's issuance of a preliminary injunction. The appeal stayed the preliminary injunction. The Appellate Court has not yet set a briefing schedule.

  The Carrillo vs. DPR and Monterey County Agricultural Commissioner lawsuit was settled in May. Under the settlement terms, DPR will review and consider the regulation of subchronic exposure to methyl bromide within its re-promulgation of methyl bromide field fumigation regulations. DPR also agreed to follow the procedures in AB 1807 in readopting these regulations. For the 2002 use season, the commissioner will develop a plan for areas within 1500 feet of Pajaro Middle School and La Joya Elementary School for methyl bromide applications, and applications will take place while school is not in session. The preliminary injunction was vacated, and the appeal of the preliminary injunction will be withdrawn.

- The Environmental Defense Center et al lawsuit and the Ventura County Agricultural Association et al lawsuit was consolidated and heard in San Francisco on February 21, 2002. The Court issued its written decision on April 9, 2002.

  The Court's order declared certain regulations void, and stayed that order for 45 days to allow DPR time to file emergency regulations. In May, the stay of the Court's April 9 order was extended at the direction of the Ventura County Agricultural Association to September 23, 2002. At that time, DPR will file emergency regulations to replace the regulations voided by the Count order, and will restart the rulemaking process by fall 2002. Refer to the previous item for details of what DPR will consider during rulemaking.

3. Critical Use Exemption Under the Clean Air Act

- The U.S. Environmental Protection Agency (U.S. EPA) is creating opportunities for information-sharing and stakeholder involvement in the development of a critical use exemption (CUE) program under which methyl bromide (chemical name bromomethane) may be obtained after the complete phase out in 2005. The exemption will permit users to obtain methyl bromide if they credibly demonstrate that there will be no technically or economically feasible alternatives available to them by the phase out date. Applicants will be required to submit information on their current use of methyl bromide and data on the status of alternatives for their crops or end use. U.S. EPA encourages users with similar circumstances of use to submit a single application, and/or work together as a grower consortium. State regulatory agencies should be contacted to receive information about their involvement in the process. DPR has agreed to participate in the exemption process. To receive information about DPR's involvement in the process, please contact Roberta Firoved at (916) 324-3533, or email her at rfiroved@cdpr.ca.gov.

  The Parties to the Montreal Protocol recognize that methyl bromide users in some countries will need a temporary safety net. The Parties to the Protocol agreed to a specific timeline, as well as data requirements, for the CUE that will provide additional time for certain end users to transition to alternatives. U.S. EPA published a Federal Register notice on May 10, 2002 requesting applications for CUEs to be submitted by September 9, 2002. U.S. EPA will evaluate these applications based on technical and economic criteria and, with other agencies, develop a nomination package for submission to the Secretariat of the Montreal Protocol in January 2003. U.S. EPA workshops will be held July 8-12, 2002 in Sacramento to assist potential applicants in preparing their applications.

  Current time line:

  1. 5/10/02 – U.S. EPA to request applications
     - DPR will do preliminary screen of California applications
     - DPR will submit California applications to U.S. EPA
  2. 9/9/02 – CUE applications due to U.S. EPA
  3. Late 2002 – U.S. government reviews applications
  4. 1/30/03 – Present nominations to Parties (to the Montreal Protocol)
  5. Technology and Economic Assessment Panel and Methyl Bromide Technical Option Committee review nominations and make recommendations to the Parties
  6. Fall 2003 – Parties authorize exemptions

7. Mid-to-late 2004 – Exemptions formally allocated
8. 1/1/05 – Phaseout

IV. 1,3-DICHLOROPROPENE

- DPR agreed to allow Dow AgroSciences (Dow) to restructure its seven-year-old program to manage the use of 1,3-dichloropropene (1,3-D). The refinements Dow has proposed will maintain existing protection of public health by minimizing long-term, problematic exposure to 1,3-D in air, while assisting growers in their transition away from methyl bromide (which is subject to a 2005 phaseout). The use of 1,3-D was capped at 90,250 pounds/per year/per township under a program of restrictions developed after the pesticide was reintroduced to the California market in 1995. For the next several years, use will be allowed above the cap in townships where use since 1995 has been significantly under the amount allowed by the cap. (The increase in annual use is limited to a total of 180,500 pounds, twice the 90,250-pound cap.) This refinement uses a limited, retrospective-averaging approach to modify annual township limits, while retaining the average use target level. In agreeing to allow Dow to restructure the 1995 agreement, we do not expect a large number of townships to exceed the current cap allocation; neither do we expect any townships to approach the high 1,3-D use levels seen in the 1980s. Additional information regarding these changes can be found on the following DPR Web page: <http://www.cdpr.ca.gov/docs/dprdocs/methbrom/mb_main.htm>.

V. CHLOROPICRIN

1. Risk Assessment/Data Evaluation

- On October 16, 2001, DPR placed all products containing chloropicrin into reevaluation. The reevaluation is based on data submitted under the Birth Defect Prevention Act. These data indicate that chloropicrin has the potential to cause adverse health effects at low doses. Air monitoring data submitted by the Chloropicrin Manufacturers Task Force indicate that the air levels of chloropicrin at some distances from treated greenhouses or fields could exceed the NIOSH standard of 0.1 ppm. Under the reevaluation, chloropicrin registrants are required to submit: (1) worker exposure studies for each type of chloropicrin fumigation site, and (2) ambient air quality monitoring and flux measurements from field and greenhouse applications, if methods other than the ones for which DPR already has data are to be employed.

  In May 2002, DPR received draft protocols for a worker exposure and air monitoring study, and a vapor trapping efficiency study.

- Chloropicrin is currently in the risk assessment process.

- ARB conducted air monitoring as described in Section I above.

VI. MITC GENERATING COMPOUNDS

1. Risk Assessment/Data Evaluation

   - DPR's toxic air contaminant risk assessment for MITC was accepted by the Scientific Review Panel (SRP) at its April 26, 2002 meeting pending review of further information.

   - ARB conducted air monitoring as described in Section 1.

   - In April, the Metam Sodium Task Force submitted several reports containing monitoring data of current application practices and modified application practices. DPR is reviewing these studies and developing options to control acute offsite exposures.

2. Risk Management Status

   - Once DPR receives the findings of the SRP and releases the risk assessment, DPR will issue a risk management directive so that risk mitigation measures can be developed.

VII. SULFURYL FLUORIDE

1. Risk Assessment/Data Evaluation

   - ARB will conduct air monitoring as described in Section 1.

   - Sulfuryl fluoride is currently in the risk assessment process.

VIII. POTENTIAL NEW FUMIGANTS

- DPR has received applications from Arvesta, formerly Tomen Agro, to register products containing the active ingredient iodomethane (methyl iodide).